

What is claimed is:

1. A vibration device comprising:
upper and lower cases combined with each other;
5 a magnetic force generating unit provided on at least one surface of the upper and lower cases;
at least one magnet formed to be opposite to the magnetic force generating unit;
a weight which forms one body together with the magnet;
10 elastic units combined to upper and lower surfaces of the weight and extended above and below the weight to elastically support the weight; and
a fixing member for fixing ends of the elastic units.

15 2. The vibration device according to claim 1, wherein the elastic unit includes a strip of a closed-curve shape and a plurality of support legs extended from the strip, and the support legs form a downwardly turning curve in an axial direction of the strip.

20 3. The vibration device according to claim 2, wherein the strip has a polygonal or circular shape.

25 4. The vibration device according to claim 2, wherein the elastic unit includes at least two support legs.

30 5. The vibration device according to claim 1, wherein the elastic unit is a coil spring of a circular or polygonal conical shape.

6. The vibration device according to claim 1, wherein the magnet is formed on only one surface of the weight opposite to the magnetic force generating unit.

35 7. The vibration device according to claim 1, wherein the magnetic force generating unit is a coil.

8. The vibration device according to claim 1, wherein the weight is made of tungsten.

5 9. The vibration device according to claim 1, wherein a magnet mounting groove of a predetermined depth is formed in one of the upper and lower surfaces of the weight.

10 10. The vibration device according to claim 1, wherein elastic unit insert grooves are formed on the upper and lower surfaces of the weight so that the elastic units are inserted and fixed therein respectively.

15 11. The vibration device according to claim 1, wherein the fixing member includes protrusions at upper and lower ends to be contacted with the upper and lower cases and a recess depressed at a center thereof, and fixing grooves are formed in ends of the protrusions respectively so as to fix ends of the elastic units.

20 12. The vibration device according to claim 10, wherein the recess is formed to ensure a space sufficient for a weight extension to be capable of moving vertically.

25 13. The vibration device according to claim 1, wherein the fixing unit has a fixing groove for fixing an end of the elastic unit, and the fixing groove is formed only at a position where the end of the elastic unit is fixed.

30 14. The vibration device according to claim 1, wherein the magnetic force generating unit is formed on one surface of each of the upper and lower cases.

35 15. The vibration device according to claim 1, wherein the magnets are formed on both surfaces of the weight so as to be opposite to the magnetic force generating unit.

16. The vibration device according to claim 1,
wherein there is one magnet formed to passing through the
weight vertically.

5

17. A vibration device comprising a strip of a
closed-curve shape and a plurality of support legs extended
from the strip, wherein the support legs form a downwardly
turning curve in an axial direction of the strip.

10

18. The vibration device according to claim 17,
wherein the strip has a polygonal or circular shape.

19. The vibration device according to claim 17,
wherein the number of the support legs is 2 or 4.

15

20. The vibration device according to claim 17,
wherein ends of the support legs are supported by a fixing
member of the vibration device.

20

21. A vibration device comprising an elastic unit,
which is a coil spring of a polygonal or circular conical
shape whose upper section is smaller than a lower section.

22. The vibration device according to claim 17 or 21,
wherein the vibration device is included in a communication
terminal or a vibrating sound instrument.

25

23. A vibration device comprising:

30

a case;

a terminal plate attached to one side of the case and
connected to an external power source;

a vibrating plate formed in an upper portion of the
case;

35

a voice coil combined below the vibrating plate;

a magnetic force generator formed below the voice coil;

a cubic elastic unit for elastically supporting the magnetic force generator; and

upper and lower covers formed above and below the case to protect inner components.

5

24. The vibration device according to claim 23, wherein the magnetic force generator comprises:

a magnet;

a yoke formed to surround the magnet; and

10

a plate seated upon the yoke.

25. The vibration device according to claim 23, wherein the elastic unit includes a circular or polygonal strip of a ring shape and a plurality of support legs extended from the strip, and

15

the support legs form a downwardly turning curve in an axial direction of the strip.

26. The vibration device according to claim 25, wherein the number of the support legs of the elastic unit is at least 2.

20

27. The vibration device according to claim 23, wherein the elastic unit is a coil spring having a circular or polygonal conical shape.

25

28. The vibration device according to claim 23, wherein the vibration device has a sound function.